

REMARKS

Claims 1-22 were examined and rejected, Applicants amend the Abstract, the specification, and claims 7, 13, and 16. Applicants submit additional drawing **Figure 10** as suggested by the Patent Office. Applicants contend that no new matter is added herein. Applicants respectfully request reconsideration of claims 1-22, as amended, in view of at least the following remarks.

I. Abstract

The Patent Office objects to the Abstract because it does not specify what methods are described. Applicants amend the Abstract to specify that the methods are methods of forming the interposer. Hence, Applicants respectfully request that the Patent Office withdraw the objection to the Abstract since the Abstract is now in compliance with MPEP § 608.01(b). A replacement Abstract is attached hereto.

II. Drawings

The Patent Office objects to the drawings because the three dimensional domes of claim 5 are not shown. Applicants believe that the three dimensional characteristic of the domes is sufficiently shown in **Figures 1-9** and described in the specification as filed. However, Applicants submit addition drawing **Figure 10** (New Sheet) which includes a three dimensional top perspective view of interposer 110. Hence, Applicants respectfully request the Patent Office withdraw the objection to the drawings since drawings 1-10 and claim 5 comply with 37 C.F.R. 1.83(a).

III. Claims Objections

The Patent Office objects to claim 7, line 4. In response, Applicants have changed “fist side” to “first side.” Hence, Applicants respectfully request the Patent Office withdraw the objection above to claim 7.

The Patent Office objects to claim 13 as not specifying of what the trace pads are. In response, Applicants amend claim 13 to specify the trace pads are of electrically conductive material. Hence, Applicants respectfully request the Patent Office withdraw the objection above to claim 13.

Next, the Patent Office objects to claim 16 because “a dome height of a plastic material” is not clear. Applicants amend claim 16 to specify that the pressure contacts include a plurality of domes having a dome diameter and a dome height, each dome comprising a plastic material having an elasticity . . . ” Hence, Applicants respectfully request the Patent Office withdraw the objection above to claim 16.

IV. Claims Rejected Under 35 U.S.C. § 102

The Patent Office rejects claims 1, 2, 5, and 10-15 under 35 U.S.C. § 102(b) as being anticipated by 5,427,535 to Sinclair (Sinclair). It is axiomatic that to be anticipated, every limitation of a claim must be disclosed within a single reference.

Applicants respectfully disagree with the rejection above and submit that independent claim 1 is allowable for at least the reason that Sinclair does not describe pressure contacts formed in the interposer, wherein the pressure contacts are directionally deformable, as required by claim 1. According to claim 1, pressure contacts formed in the interposer include some of the structure of the interposer.

Sinclair describes base 26 having apertures 32 drilled therethrough or molded therein to extend entirely from top face 28 to bottom face 30 (see col. 5, lines 57-60). Resilient, electrically-conductive terminal assemblies 38 are mounted in apertures 32, where each of assembly 38 includes a terminal 40 insert molded into a generally cylindrical elastomeric plug 42 (see col. 6, lines 3-7). Moreover, terminal 40 include dimples 50 and 52 on contacts 46 and 48, where contacts 46 and 48 define pressure-bearing surfaces that will compress resiliently deflectable generally sinusoidal bends 54 and an adjacent elastomer of plug 42 (see col. 6, lines 26-40).

However, the Patent Office has not identified and Applicants are unable to find any description in Sinclair that accounts for pressure contacts formed in the interposer, wherein the pressure contacts are directionally deformable, as required by claim 1. Specifically, there is no description of base 26 being deformable. Instead, only terminal assemblies 38 (each including a terminal 40) mounted in apertures 32 formed through base 26, are described as deformable. Moreover, dimples 50 and 52 to contact electrical devices above and below base 26, are not described as deformable. Hence, for at least

the reasons cited above, Applicants respectfully request that the Patent Office withdraw the rejection above to claim 1.

Applicants submit that dependent claims 2-12, being dependent upon allowable base claim 1, are patentable over the cited references for at least the reasons cited above. Thus, Applicants respectfully request the Patent Office withdraw the rejection of dependent claims 2-12 as being unpatentable.

In addition to the reasons given above with respect to dependent claim 5, Applicants respectfully disagree with the rejection above and submit that dependent claim 5 is allowable for the reason that Sinclair does not describe flexible three dimensional domes formed in the generally planar interposer, as required by claim 5. Specifically, in addition to the argument provided above with respect to claim 1, the Patent Office has not identified and Applicants are unable to find any teaching or suggestion in Sinclair of domes formed in the generally planar interposer. Instead, Sinclair describes apertures 32 drilled therethrough. Hence, for at least this additional reason, Applicants respectfully request the Patent Office withdraw the rejection above of dependent claim 5.

Also, Applicants respectfully disagree with the rejection above and submit that independent claim 13, as amended, is allowable for at least the reason that Sinclair does not describe a plurality of pressure contacts on the second side of the planar-shaped base to form removable electrical pressure connections to connector pads of an electronic device, as required by amended claim 13. An argument analogous to the one above with respect to claim 1 applies here as well. Specifically, Sinclair does not describe pressure contacts on a planar shape, but instead describes resilient electrically-conductive terminal assemblies 38 mounted in apertures 32 formed through base 26. Hence, for at least this first reason, Applicants respectfully request the Patent Office withdraw the rejection above of claim 13.

Applicants assert that dependent claims 14-19, being dependent upon allowable base claim 13, are allowable to at least the reasons explained above. Hence, Applicants respectfully request the Patent Office withdraw the rejection above of dependent claims 14-19.

In addition to the reasons above, Applicants respectfully disagree with the rejection above and submit that dependent claim 16, as amended, is allowable for at least the reason that Sinclair does not describe pressure contacts on the second side of the planar shape, wherein the pressure contacts include domes having an elasticity and thickness sufficient to flex without permanently deforming or damaging the pressure contacts, as required by claim 16. An argument analogous to the one provided above with respect to dependent claim 5 applies here as well. Hence, for at least this second reason, Applicants respectfully request that the Patent Office withdraw the rejection of dependent claim 16.

V. Claims Rejected Under 35 U.S.C. § 103

The Patent Office rejects claims 3, 4, 6-9 and 16-22 under 35 U.S.C. § 103(a) as being unpatentable over Sinclair. To render a claim obvious, all limitations of that claim must be taught or suggested by at least one properly combined reference.

Applicants respectfully disagree with the rejection above of claims 3, 4, 6-9 and 16-19 for at least the reasons that those claims depend upon allowable base claims 1 and 13. Thus, dependent claims 3, 4, 6-9 and 16-19 are allowable for at least the reasons explained above. Hence, Applicants respectfully request that the Patent Office withdraw the rejection above of dependent claims 3, 4, 6-9 and 16-19.

Next, for claims 4, 8, 16, and 17, the Patent Office asserts that it is inherent that a pressure should be between 0.4/0.2 Newton and 1.4/0.6 Newton and it would have been obvious to one of ordinary skill in the art, at the time of the invention, for the pressure to be between 0.4/0.2 Newton and 1.4/0.6 Newton in order not to permanently deform the structure and thus the modulus of elasticity greater than the pressure applied. Applicants disagree that it is inherent since pressures outside of the claimed ranges could be applied and since interposers, as known in the art, do not exclude those that become permanently deformed when the claimed pressure is applied thereto. Moreover, Applicants respectfully traverse the above statement by the Patent Office and request that the Patent Office cite a reference in support of that position in accordance with MPEP §2144.03. Hence, for at least this additional reason, Applicants

respectfully request that the Patent Office withdraw the rejection of dependent claims 4, 8, 16 and 17.

Furthermore, for claims 3, 6, 7, 9, 18, and 19, the Patent Office asserts it would have been an obvious matter of design choice for Sinclair to have various dimensions as claimed. Applicants respectfully disagree as the various dimensions claimed allow an interposer having pressure contacts formed therein to be directionally deformable under a desired range of contact pressure without becoming permanently deformed or damaged. Therefore, Applicants respectfully traverse the above statement by the Patent Office and request the Patent Office cite a reference in support of that position, in accordance with MPEP §2144.03. Hence, for at least this additional reason, Applicants respectfully request the Patent Office withdraw the rejection of dependent claims 3, 6, 7, 9, 18, and 19.

Also, Applicants respectfully disagree with the rejection above of claims 20-22 and submit that independent claim 20 is allowable for at least the reason that Sinclair does not teach or suggest three dimensional pressure contacts in the formable planar base, wherein the pressure contacts are directionally deformable, as required by claim 20. An argument analogous to the one provided above with respect to independent claim 1 applies here as well. Specifically, Sinclair teaches assemblies 38 mounted in apertures 32 of base 26. However, the Patent Office has not identified and Applicants are unable to find any teaching or suggestion of three dimensional pressure contacts formed in a formable planar base, wherein the contacts are directionally deformable, as required by claim 20. Hence, for at least this reason, Applicants respectfully request the Patent Office withdraw the rejection above of independent claim 20.

Applicants submit that dependent claims 21-22, being dependent upon allowable base claim 20, are allowable for at least the reasons given above. Hence, Applicants respectfully request that the Patent Office withdraw the rejection to dependent claims 21-22.

CONCLUSION

In view of the foregoing, it is believed that all claims now pending (1) are in proper form, (2) are neither obvious nor anticipated by the relied upon art of record, and (3) are in condition for allowance. A Notice of Allowance is earnestly solicited at the earliest possible date. If the Examiner believes that a telephone conference would be useful in moving the application forward to allowance, the Examiner is encouraged to contact the undersigned at (310) 207-3800.

If necessary, the Commissioner is hereby authorized in this, concurrent and future replies, to charge payment or credit any overpayment to Deposit Account No. 02-2666 for any additional fees required under 37 C.F.R. §§ 1.16 or 1.17, particularly, extension of time fees.

Respectfully submitted,

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Dated: March 31, 2005

By: _____

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CERTIFICATE OF MAILING

I hereby certify that this correspondence is being deposited with the United States Postal Service as First Class Mail with sufficient postage in an envelope addressed to Mail Stop Amendment, Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313 on 3/31/05.

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3/31/05
Date



ABSTRACT

A generally planar interposer having a plurality of interposer contact pads to contact a plurality of first contacts of a first electronic device on one side of the interposer, and a plurality of electrical connections between the interposer contact pads and a plurality of pressure contacts on the other side of the interposer. Each of the pressure contacts having a directionally deformable contact surface to removably contact a plurality of second contacts of a second electronic device on the other side of the interposer. Also methods of forming the interposer.